

# (12) UK Patent Application (19) GB (11) 2 386 797 (13) A

(43) Date of A Publication 24.09.2003

(21) Application No 0303709.0

(22) Date of Filing 18.02.2003

(30) Priority Data

(31) 2002040619 (32) 18.02.2002 (33) JP

(71) Applicant(s)

NEC Corporation  
(Incorporated in Japan)  
7-1 Shiba 5-chome, Minato-ku, Tokyo 108,  
Japan

(72) Inventor(s)

Tsukasa Sato

(74) Agent and/or Address for Service

Mathys & Squire  
100 Grays Inn Road, LONDON, WC1X 8AL,  
United Kingdom

(51) INT CL<sup>7</sup>

H04Q 7/22

(52) UK CL (Edition V)

H4L LEUF

(56) Documents Cited

WO 2001/024494 A1

US2002/0151326 A1

KR2001018987 A

(58) Field of Search

UK CL (Edition V) H4L LDPC LEUF LEUM

INT CL<sup>7</sup> H04M 1/274, H04Q 7/22

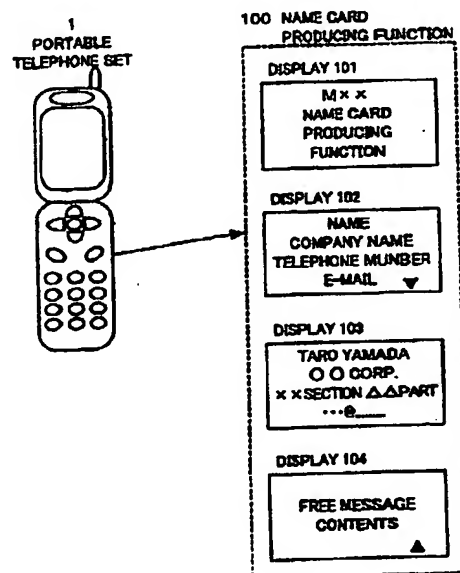
Other: ONLINE: EPODOC, WPI, JAPAPIO

(54) Abstract Title

Mobile communication terminal with name-card function

(57) When a user initiates a name-card management program of a portable telephone set 1, a name-card producing function 100 is selected by a menu key, and a desired name-card pattern is read-out for producing name-card data, which is then stored in a memory. For name-card exchange, the telephone number or mail address of another party's terminal is inputted and, after one's own name-card data stored in memory has been viewed on a display to confirm it, that name-card data is transmitted to the other party. By designating on the display a saving function in the presence of name-card data received from the other party, the received name-card data may be stored in the memory.

FIG.1



GB 2 386 797 A

FIG.1

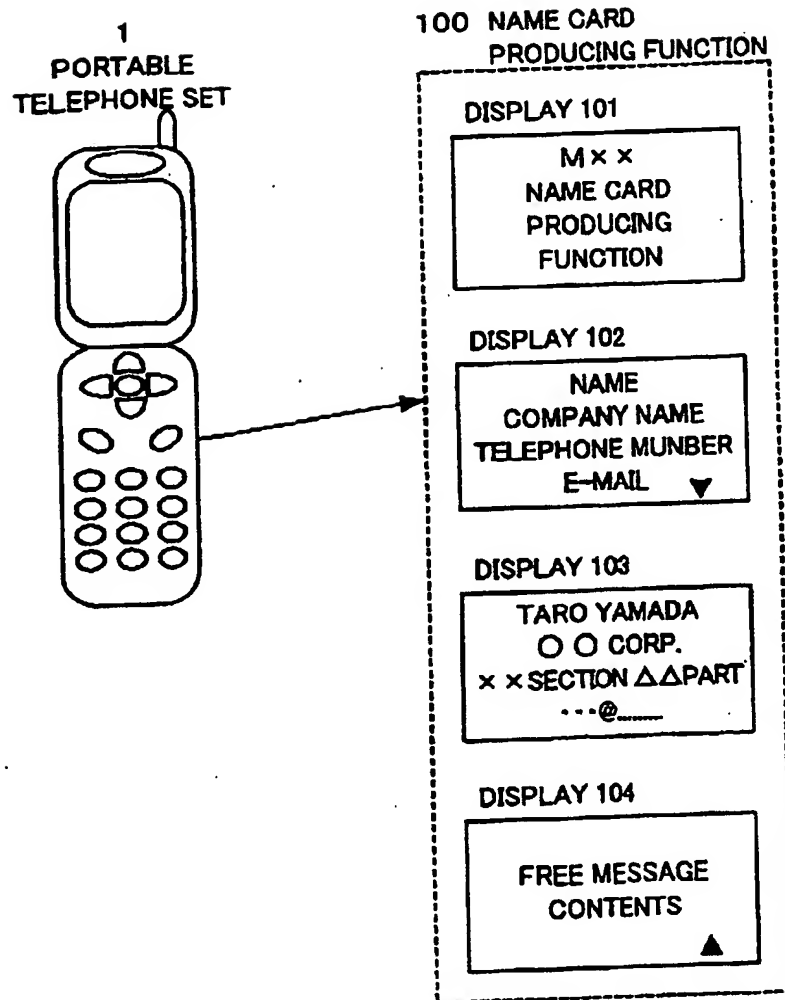


FIG.2

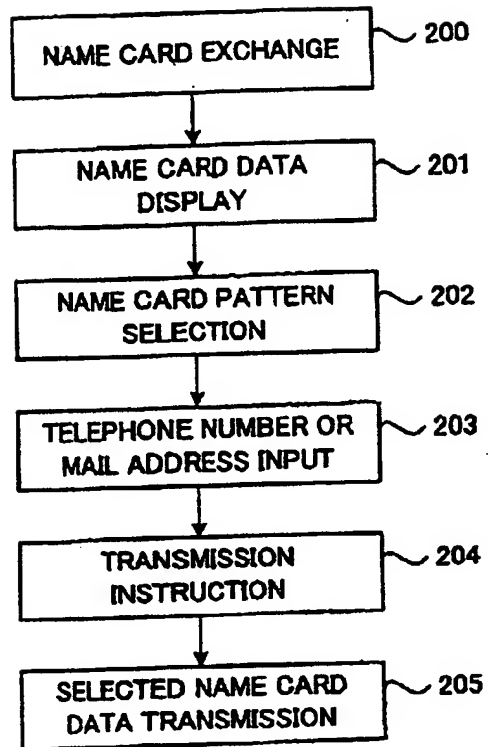


FIG. 3

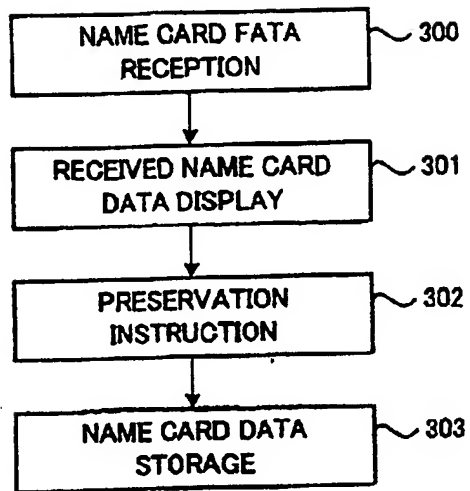
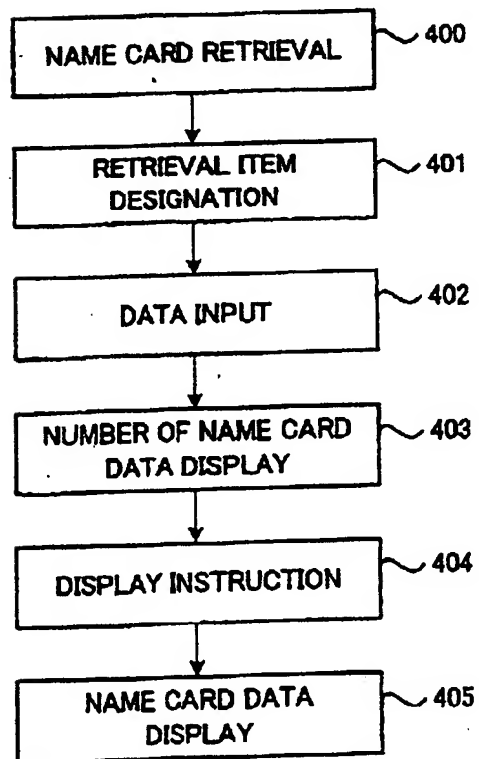


FIG. 4



## PORTABLE COMMUNICATION TERMINAL

BACKGROUND OF THE INVENTION

The present invention relates to portable communication terminals, such as portable telephone sets, with a name-card substitution function, and permits name-card  
5 exchange via a communication network.

Name cards are usually constituted by paper cards with impressed personal data; their exchange for cards of others fulfills an auxiliary communication function. It is thus indispensable to carry name cards when, for  
10 instance, making a business trip. However, it frequently occurs that the carried name cards run out due to the length of a trip being extended. Inability to present a card may then result in impoliteness.

Also, collected name cards may be stocked in an  
15 exclusive file, or their data may be manually inputted to an electronic diary, so that the cards or data can be utilized when it becomes necessary to do so. However, with an increase in the number of collected name cards, a long time is required for retrieving the necessary  
20 name-card file. Another problem is that inputting name-card data by key operation is time-consuming.

As a means for solving the above problems, it has been proposed to make use of a PDA (personal digital assistant) having a communication function, or a  
25 portable personal computer. In the PDA, it is possible to exchange preliminarily-registered name-card data with

other PDA data, and to input received data to an address diary in one's own system. In the case of utilizing a portable personal computer, it is possible to install PIM (personal information manager) software or a similar  
5 program having a name-card exchange function or an address diary management function related thereto for automatic name-card data exchange with other communication systems (as disclosed in, for instance, laid-open Japanese Patent No. 2000/207788).

10 Furthermore, laid-open Japanese Patent No. 2001/117883 discloses a portable telephone terminal, in which a terminal owner's electronic name-card data is preliminarily-registered therein to be taken out in an exclusive wireless system in lieu of a paper name-card  
15 at the time of name-card exchange greeting, while collected name-card management is automatically done therein, thus ensuring the portability of name-card data and permitting name-card data retrieval at any place without need of carrying a PDA or portable personal  
20 computer.

The above-disclosed portable telephone terminal comprises application software provided for inputting and recording such name-card data as the company name, department, management position, name, address, tele-  
25 phone number, FAX number and electronic-mail address of its owner, a memory for storing such data, application software provided for receiving like name-card data from the opposite side and permitting the input of memory data related to the name-card exchange for managing and

recording the data in units of items, and a memory for storing such data. The name-card exchange is effected by mutual transmission and reception of the name-card data between the two portable telephone terminals in a  
5 frequency band free from any trouble in the usual portable telephone system utilization and in a wireless system based on narrow reception area, low-intensity wireless waves, or on light radiation such as infrared radiation. The terminal further has a function of per-  
10 mitting the retrieval of a contact destination telephone number or a designation of electronic-mail destination so as to be able to directly address the destination from it.

The name-card exchange which is done by the above-  
15 disclosed portable telephone terminal does not require any paper name card, thus leading to the saving of pulp resources. Also, since no name cards have to be ordered and purchased, cost reduction can be realized, and also name-card management can be facilitated. Furthermore,  
20 with recent wireless spread of portable telephone sets, an advantage is provided that the name-card exchange can be made without need for separately carrying a PDA or portable personal computer.

For name-card exchange, however, the portable tele-  
25 phone terminal disclosed in the above laid-open publication requires separate provision of a construction for doing wireless communication in a frequency band free from any trouble for utilizing the usual portable telephone system and with weak radio waves of narrow recep-

tion area or light such as infrared radiation, and this is a cause of corresponding cost increase of the portable telephone terminal.

5 SUMMARY OF THE INVENTION

In view of the above problems, an object of the preferred embodiment of the present invention is to provide a means capable of electronic name-card exchange by utilizing e-mail or fast data communi-  
10 cation function as a movable unit communication function in a portable telephone set.

According to an aspect of the present invention, there is provided a portable communication terminal (for example, terminal telephone set) with a name card substitution  
15 function, which has a key for inputting data and a display unit for displaying data produced by key input or received data and also has a function of transmitting and receiving data via a network, the portable telephone set comprising:  
a name card data producing function for producing name card  
20 data with key input, a function for storing the produced name card data, a function of presetting a name card exchange mode, a name card data transmitting function that, when the name card exchange mode is preset and data transmission to an other portable telephone set is designated, the data  
25 transmitting and receiving function is provided to read out the stored name card data and transmit the read-out data to the other portable telephone set, and a function of name card data received by the data transmitting and



receiving function on the display unit.

The above functions are executed according to a name card processing program stored in a memory provided in the portable telephone set. The name card managing program  
5 includes such functions as a name card producing function, a function of storing produced name card data, a function of reading out the stored name card data while also displaying and transmitting the read-out data, a function of displaying received name card data while storing the data in a memory  
10 and a function of retrieving the stored name card data.

As for the name card producing function, a plurality of name card patterns of different formats are preliminarily stored, and the user can read out a desired name card pattern among the prepared ones and produce a desired name card  
15 data piece by key inputting the read-out name card data. The function also includes a function of permitting name card data of a plurality of different patterns to be produced and stored in the memory so as to be able, at a name card exchange time, to select and transmit a desired name card  
20 pattern among the plurality of produced patterns.

The mobile communication terminal (for example, portable telephone set) according to the present invention can realize a function of permitting name card exchange by utilizing i mail or fast data communication provided  
25 as a communication function. The name card exchange is thus possible without need of separately providing the portable telephone set with any exclusive hardware for name card exchange and also without need of separately carrying any

PDA or personal computer.

#### BRIEF DESCRIPTION OF THE DRAWINGS

Preferred features of the present invention will now be described, by way of example only, with reference to the accompanying drawings, in which:-

Fig. 1 is a schematic representation of a name card producing function embodying the present invention;

Fig. 2 is a flow chart of processing illustrating the name card exchange function according to the present invention;

Fig. 3 is a flow chart of processing illustrating name card receiving function according to the present invention; and

Fig. 4 is a flow chart of processing illustrating the name card retrieving function according to the present invention.

#### PREFERRED EMBODIMENTS OF THE INVENTION

Preferred embodiments of the present invention will now be described with reference to the drawings.

Fig. 1 is a schematic representation of a name card producing function embodying the present invention. A name card managing program for executing the present invention is stored in a memory in a portable telephone set 1.

When the name card management program as a user function of the portable telephone set 1 is started and the name card producing function 100 is selected by a menu key (i.e., M key), a display 101 appears on the display screen (i.e., LCD) of the portable telephone set 1. By

depressing determination key after the provision of the display 101, a display 102 appears, and the user then key inputs name card data such as name, company name, telephone number and E-mail address in an entry column (display 103).

5       The company name, the telephone number and the E-mail address, however, need not be essentially entered, but serve as optional functions. For example, when meeting company-related people, the place of option is of course clearly entered, but this item is unnecessary for people  
10 who do company work such as students and housewives.

For this reason, a plurality of name card patterns of different formats are preliminarily prepared and stored as name card producing function of this embodiment, and by designating name card pattern switching in the presence  
15 of the display 102, the name card patterns stored in the program are successively switched and displayed. The user thus select adequate name card patterns among the displayed name card patterns.

Also, it is possible to produce a name card having  
20 a pattern peculiar to the user by key inputting name card data corresponding to a name card pattern having a horizontal-write format read out as the display 102 and then changing the read-out data to a vertical-write data format or designating the change of the size, the font,  
25 etc. of the characters. When no appropriate name card pattern is present among the read-out name card patterns, a name card pattern with arrangement of name card data peculiar to the user can be produced by selecting new name

card pattern production in the presence of the display 102.

By producing a desired name card (i.e., display 3) and depressing a certification key, a display 104 appears, in which free message contents can be entered. Then, by  
5 entering a free message and depressing a registration key, the produced name card data is registered in the memory in the portable telephone set. The display 104 permits leaving as data contents of talks and prearrangements and also the dates of meeting with the opposite side for  
10 transmitting the name card data thereto and, in the case of friends, enjoying the P. R. or the like of the user himself or herself.

The data produced with the function as described above can be preserved up to about 100 cases at the most. When  
15 it is desired to leave data forever, it is possible to preserve the data in a personal computer used by the user.

Fig. 2 is a flow chart of processing illustrating the name card exchange function according to the present invention. When the name card exchange function is selected  
20 by the M key (Step 200), the own name card data produced by the name card producing function 100 and preserved in the memory is read out and displayed in the display unit (Step 201). In the case of presence of a plurality of different name card patterns registered in the memory, the  
25 user prearranges and causes display of the fact that other name card patterns have been registered.

The user then causes successive display of the registered name card patterns and, when a desired name card

pattern appears on the display, depresses the certification key (Step 202). Then, the user inputs the telephone number or mail address of the opposite side terminal (Step 203), and depresses a transmit key (Step 204). As a result, the  
5 desired name card data and accompanying registered free message are transmitted to the opposite side terminal (Step 205).

Fig. 3 is a flow chart of processing illustrating name card receiving function according to the present  
10 invention. When name card data from the opposite side terminal is received (Step 300), the received name card data is displayed on the display unit (Step 301). By depression of a preserve key in the presence of the name card data display (Step 302), the received name card data  
15 is stored in the memory (Step 303).

The name card data stored in the memory can be retrieved for by a name card retrieving function. Fig. 4 is a flow chart of processing illustrating the name card retrieving function according to the present invention. By selecting  
20 the name card retrieving function by the M key (Step 400), designating the retrieval items such as name, company name, etc. (Step 401) and key inputting the data (Step 402), the number of pieces of pertinent name card data is displayed on the display unit (Step 403). When the pertinent name  
25 card data piece number is too large, it can be reduced by increasing the number of retrieval items.

By depressing a key for designating name card data display in the presence of the pertinent name card data

piece number display on the display unit (Step 404), one of the hit name card data ICES is displayed on the display unit (Step 405). Subsequently, the other hit name card data pieces are displayed successively one with each depression  
5 of the name card data display designation key.

According to the present invention, no name card is necessary, thus leading to the savings of the paper cost and resources. Also, since the widely spread portable telephone functions can be directly utilized, the name card  
10 exchange can be realized at a relatively low cost. Furthermore, it is possible to change the name card style as desired. Still further, since the name card data is not of any name card determined by any company, it is possible to readily appeal oneself to the opposite side to provide  
15 marriage, and the name card data can be made active use of as a means for maintaining satisfactory condition of communication.

Changes in construction will occur to those skilled in the art and various apparently different modifications  
20 and embodiments may be made without departing from the scope of the present invention. The matter set forth in the foregoing description and accompanying drawings is offered by way of illustration only. It is therefore intended that the foregoing description be regarded as illustrative rather  
25 than limiting.

Each feature disclosed in this specification (which term includes the claims) and/or shown in the drawings may be incorporated in the invention independently of other disclosed and/or illustrated features.

5       The text of the abstract filed herewith is repeated here as part of the specification.

When a user initiates a name-card management program of a portable telephone set, a name-card producing function is selected by a menu key, and a desired  
10   name-card pattern is read-out for producing name-card data, which is then stored in a memory. For name-card exchange, the telephone number or mail address of  
another party's terminal is inputted and, after one's own name-card data stored in memory has been viewed on  
15   a display to confirm it, that name-card data is transmitted to the other party. By designating on the display a saving function in the presence of name-card data received from the other party, the received name-card data may be stored in the memory.

20       This application claims the benefit of Japanese Patent Application No. 2002/040619, filed on 18 February 2002, the contents of which are incorporated herein by reference.

CLAIMS:

1. A portable communication terminal having key input means, display means, transmitting-and-receiving means, and a memory means, the terminal allowing a user of the terminal to use the key means to produce user identification information in a preset format and also allowing such formatted information to be transmitted, the terminal also allowing the user to receive user identification information in a preset format from another portable communication terminal and to display the received information on the display means in the received format.

2. The portable communication terminal according to claim 1, wherein the preset format corresponds to a format normally found on a name card or a business card.

3. The portable communication terminal according to claim 1 or 2, wherein the preset format is selectable by the user from among a plurality of preliminarily-prepared formats stored in the memory means.

4. The portable communication terminal according to claim 3, wherein the preliminarily-prepared formats are all formats normally found on name cards or business cards.

5. The portable communication terminal according



to any one of claims 1 to 4, wherein the user identification information to be transmitted is storable in the memory means.

6. The portable communication terminal according to any one of claims 1 to 5, wherein the received user identification information is storable in the memory means.

7. The portable communication terminal according to any one of claims 1 to 6, wherein the terminal also allows the user to use the key means to produce a free message contents entry column for transmission with the user identification information.

8. The portable communication terminal according to any one of claims 1 to 7, wherein the terminal also allows a user to extract predetermined data from among the received user identification information and to save the extracted data in a telephone diary in the terminal.

9. A portable communication terminal with a name-card substitution function, which terminal has a key means for inputting data, a display means for displaying data produced by key input or by received data, and a transmitting and receiving means for transmitting and receiving data via a network, the portable communication terminal including: a function of producing name-card data by key input, a function of storing the produced

name-card data, a function of presetting a name-card exchange mode, a function of transmitting the name-card data to another portable communication terminal when the name-card exchange mode is preset and data transmission to the other portable communication terminal is designated, and a function of displaying received name-card data on the display means.

10. The portable communication terminal with a name-card substitution function according to claim 1, wherein the name-card data-producing function includes a function of producing name-card data from a name-card pattern selected from among a plurality of preliminarily-prepared name-card patterns of different formats and the key-inputted name-card data.

11. The portable communication terminal with a name-card substitution function according to claim 10, wherein the name-card data producing function is provided with a free message contents entry column as the name-card data.

12. The portable communication terminal with a name-card substitution function according to claim 2 or 3, wherein the function of storing the produced data includes a function of saving a plurality of name-card data of different formats produced by the name-card data-producing function.

13. The portable communication terminal with a name-card substitution function according to claim 12, wherein the name-card data-transmitting function involves reading-out and transmitting selected name-card data from among a plurality of saved name-card data of different formats produced by the name-card producing function.

14. The portable communication terminal with a name-card substitution function according to any one of claims 9 to 13, further comprising a function of storing the received name-card data and a function of retrieving and displaying the stored name-card data in response to a user operation.

15. The portable communication terminal with a name-card substitution function according to any one of claims 9 to 14, further comprising a function of extracting predetermined data among the received name-card data and transferring, for saving, the extracted data to a telephone diary in the terminal.

16. The portable communication terminal according to any one of claims 1 to 15, wherein the terminal is a portable telephone set.

17. A portable communication terminal substantially as herein described with reference to and as shown in the accompanying drawings.



INVESTOR IN PEOPLE

Application No: GB 0303709.0  
Claims searched: all

Examiner: Nigel Hall  
Date of search: 15 July 2003

## Patents Act 1977 : Search Report under Section 17

### Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X	1, 9 at least	WO 01/24494 A1 (NOKIA) See p.2 lines 22-31, page 5 lines 18-31
X, P	1-3, 9 at least	US 2002/0151326 A1 (AWADA) See whole document
X	1, 9 at least	KR2001018987 A (DAEWOO) See abstract

### Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

### Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC<sup>v</sup>:

H4L

Worldwide search of patent documents classified in the following areas of the IPC<sup>7</sup>:

H04M; H04Q

The following online and other databases have been used in the preparation of this search report:

Online: EPODOC, WPI, JAPIO